



## SEQUENCE LISTING

&lt;110&gt; GLUCKSMANN, MARIA ALEXANDRA

<120> 93870, A HUMAN G-PROTEIN COUPLED  
RECEPTOR AND USES THEREFOR

&lt;130&gt; MPI2001-021P1RCP1 (M)

&lt;140&gt; 10/085,233

&lt;141&gt; 2002-02-28

&lt;150&gt; 60/272,677

&lt;151&gt; 2001-03-01

&lt;160&gt; 6

&lt;170&gt; FastSEQ for Windows Version 4.0

&lt;210&gt; 1

&lt;211&gt; 1684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (147)...(1085)

<223> n at position 1384 can be any  
nucleotide

&lt;400&gt; 1

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tggaagtgtg agactggata agagatgctc agctaaggga gttcctggat ggcctttaga 120
ttgatacacc aatcctctga aattgc atg caa aaa tgt gac ttc cca agt atg 173
Met Gln Lys Cys Asp Phe Pro Ser Met
1 5
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```
cct ggc cac aat acc tcc agg aat tcc tct tgc gat cct ata gtg aca 221
Pro Gly His Asn Thr Ser Arg Asn Ser Ser Cys Asp Pro Ile Val Thr
10 15 20 25
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ccc cac tta atc agc ctc tac ttc ata gtg ctt att ggc ggg ctg gtg 269
Pro His Leu Ile Ser Leu Tyr Phe Ile Val Leu Ile Gly Gly Leu Val
30 35 40
```

```
ggg gtc att tcc att ctt ttc ctc ctg gtg aaa atg aac acc cgg tca 317
Gly Val Ile Ser Ile Leu Phe Leu Leu Val Lys Met Asn Thr Arg Ser
45 50 55
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```
gtg acc acc atg gcg gtc att aac ttg gtg gtg gtc cac agc gtt ttt 365
Val Thr Thr Met Ala Val Ile Asn Leu Val Val Val His Ser Val Phe
60 65 70
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```
ctg ctg aca gtg cca ttt cgc ttg acc tac ctc atc aag aag act tgg 413
Leu Leu Thr Val Pro Phe Arg Leu Thr Tyr Leu Ile Lys Lys Thr Trp
75 80 85
```

```
atg ttt ggg ctg ccc ttc tgc aaa ttt gtg agt gcc atg ctg cac atc 461
Met Phe Gly Leu Pro Phe Cys Lys Phe Val Ser Ala Met Leu His Ile
90 95 100 105
```

```
cac atg tac ctc acg ttc cta ttc tat gtg gtg atc ctg gtc acc aga 509
His Met Tyr Leu Thr Phe Leu Phe Tyr Val Val Ile Leu Val Thr Arg
110 115 120
```

|  |      |
|--|------|
| tac ctc atc ttc ttc aag tgc aaa gac aaa gtg gaa ttc tac aga aaa      | 557  |
| Tyr Leu Ile Phe Phe Lys Cys Lys Asp Lys Val Glu Phe Tyr Arg Lys      |      |
| 125 130 135  |      |
| ctg cat gct gtg gct gcc agt gct ggc atg tgg acg ctg gtg att gtc      | 605  |
| Leu His Ala Val Ala Ala Ser Ala Gly Met Trp Thr Leu Val Ile Val      |      |
| 140 145 150  |      |
| att gtg gta ccc ctg gtt gtc tcc cgg tat gga atc cat gag gaa tac      | 653  |
| Ile Val Val Pro Leu Val Val Ser Arg Tyr Gly Ile His Glu Glu Tyr      |      |
| 155 160 165  |      |
| aat gag gag cac tgt ttt aaa ttt cac aaa gag ctt gct tac aca tat      | 701  |
| Asn Glu Glu His Cys Phe Lys Phe His Lys Glu Leu Ala Tyr Thr Tyr      |      |
| 170 175 180 185  |      |
| gtg aaa atc atc aac tat atg ata gtc att ttt gtc ata gcc gtt gct      | 749  |
| Val Lys Ile Ile Asn Tyr Met Ile Val Ile Phe Val Ile Ala Val Ala      |      |
| 190 195 200  |      |
| gtg att ctg ttg gtc ttc cag gtc ttc atc att atg ttg atg gtg cag      | 797  |
| Val Ile Leu Leu Val Phe Gln Val Phe Ile Ile Met Leu Met Val Gln      |      |
| 205 210 215  |      |
| aag cta cgc cac tct tta cta tcc cac cag gag ttc tgg gct cag ctg      | 845  |
| Lys Leu Arg His Ser Leu Leu Ser His Gln Glu Phe Trp Ala Gln Leu      |      |
| 220 225 230  |      |
| aaa aac cta ttt ttt ata ggg gtc atc ctt gtt tgt ttc ctt ccc tac      | 893  |
| Lys Asn Leu Phe Phe Ile Gly Val Ile Leu Val Cys Phe Leu Pro Tyr      |      |
| 235 240 245  |      |
| cag ttc ttt agg atc tat tac ttg aat gtt gtg acg cat tcc aat gcc      | 941  |
| Gln Phe Phe Arg Ile Tyr Tyr Leu Asn Val Val Thr His Ser Asn Ala      |      |
| 250 255 260 265  |      |
| tgt agc agc aag gtt gca ttt tat aac gaa atc ttc ttg agt gta aca      | 989  |
| Cys Ser Ser Lys Val Ala Phe Tyr Asn Glu Ile Phe Leu Ser Val Thr      |      |
| 270 275 280  |      |
| gca att agc tgc tat gat ttg ctt ctc ttt gtc ttt ggg gga agc cat      | 1037 |
| Ala Ile Ser Cys Tyr Asp Leu Leu Leu Phe Val Phe Gly Gly Ser His      |      |
| 285 290 295  |      |
| tgg ttt aag caa aag ata att ggc tta tgg aat tgt gtt ttg tgc cgt      | 1085 |
| Trp Phe Lys Gln Lys Ile Ile Gly Leu Trp Asn Cys Val Leu Cys Arg      |      |
| 300 305 310  |      |
| tagccacaaa ctacagtatt catatttgct tcctttatat tgggaataaa atgggtatag    | 1145 |
| gggaggttaag aatggtatatt cattacttga tcaaaaccat gccttgatgt acccaaaaca  | 1205 |
| aaaggactat aaaatgcaag agccctcatt gtagtcctta tgggatccct cccatctctg    | 1265 |
| agtgatggcc gtacaaagac cagtgttggt gaatccacct ggagttgcaa tattacatta    | 1325 |
| ttttccagta cagaatgtct gtgtggccca tgaaagcaac atagggtttta agagttttna   | 1385 |
| gagtttcatt agctcattct aagttcctct gtttgaagca tgggtctctta ggttttgac    | 1445 |
| tgaactcaga ccttttagttc ttttcatccc acttcacccat aggttaagtaa attctggcca | 1505 |
| ccaccagct ccaaagacac aaactctcct tcgctaacca gggttagatgt cccattcatc    | 1565 |
| tcatgccctg ataaaaactg ataaggggag agaatatgta aaaatttttc tagggatatca   | 1625 |
| taactctggt aggaagtcatt ctgtctagac tcgagcaagc ttatgcatgc atgcggccg    | 1684 |
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| <211> 313  |      |
| <212> PRT  |      |
| <213> Homo sapiens   |      |
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| Met Gln Lys Cys Asp Phe Pro Ser Met Pro Gly His Asn Thr Ser Arg      |      |
| 1 5 10 15  |      |
| Asn Ser Ser Cys Asp Pro Ile Val Thr Pro His Leu Ile Ser Leu Tyr      |      |
| 20 25 30   |      |

Phe Ile Val Leu Ile Gly Gly Leu Val Gly Val Ile Ser Ile Leu Phe  
 35 40 45  
 Leu Leu Val Lys Met Asn Thr Arg Ser Val Thr Thr Met Ala Val Ile  
 50 55 60  
 Asn Leu Val Val Val His Ser Val Phe Leu Leu Thr Val Pro Phe Arg  
 65 70 75 80  
 Leu Thr Tyr Leu Ile Lys Lys Thr Trp Met Phe Gly Leu Pro Phe Cys  
 85 90 95  
 Lys Phe Val Ser Ala Met Leu His Ile His Met Tyr Leu Thr Phe Leu  
 100 105 110  
 Phe Tyr Val Val Ile Leu Val Thr Arg Tyr Leu Ile Phe Phe Lys Cys  
 115 120 125  
 Lys Asp Lys Val Glu Phe Tyr Arg Lys Leu His Ala Val Ala Ala Ser  
 130 135 140  
 Ala Gly Met Trp Thr Leu Val Ile Val Ile Val Val Pro Leu Val Val  
 145 150 155 160  
 Ser Arg Tyr Gly Ile His Glu Glu Tyr Asn Glu Glu His Cys Phe Lys  
 165 170 175  
 Phe His Lys Glu Leu Ala Tyr Thr Tyr Val Lys Ile Ile Asn Tyr Met  
 180 185 190  
 Ile Val Ile Phe Val Ile Ala Val Ala Val Ile Leu Leu Val Phe Gln  
 195 200 205  
 Val Phe Ile Ile Met Leu Met Val Gln Lys Leu Arg His Ser Leu Leu  
 210 215 220  
 Ser His Gln Glu Phe Trp Ala Gln Leu Lys Asn Leu Phe Phe Ile Gly  
 225 230 235 240  
 Val Ile Leu Val Cys Phe Leu Pro Tyr Gln Phe Phe Arg Ile Tyr Tyr  
 245 250 255  
 Leu Asn Val Val Thr His Ser Asn Ala Cys Ser Ser Lys Val Ala Phe  
 260 265 270  
 Tyr Asn Glu Ile Phe Leu Ser Val Thr Ala Ile Ser Cys Tyr Asp Leu  
 275 280 285  
 Leu Leu Phe Val Phe Gly Gly Ser His Trp Phe Lys Gln Lys Ile Ile  
 290 295 300  
 Gly Leu Trp Asn Cys Val Leu Cys Arg  
 305 310

<210> 3  
 <211> 939  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)...(939)

<400> 3  
 atg caa aaa tgt gac ttc cca agt atg cct ggc cac aat acc tcc agg 48  
 Met Gln Lys Cys Asp Phe Pro Ser Met Pro Gly His Asn Thr Ser Arg  
 1 5 10 15  
 aat tcc tct tgc gat cct ata gtg aca ccc cac tta atc agc ctc tac 96  
 Asn Ser Ser Cys Asp Pro Ile Val Thr Pro His Leu Ile Ser Leu Tyr  
 20 25 30  
 ttc ata gtg ctt att ggc ggg ctg gtg ggt gtc att tcc att ctt ttc 144  
 Phe Ile Val Leu Ile Gly Gly Leu Val Gly Val Ile Ser Ile Leu Phe  
 35 40 45  
 ctc ctg gtg aaa atg aac acc cgg tca gtg acc acc atg gcg gtc att 192  
 Leu Leu Val Lys Met Asn Thr Arg Ser Val Thr Thr Met Ala Val Ile  
 50 55 60  
 aac ttg gtg gtg gtc cac agc gtt ttt ctg ctg aca gtg cca ttt cgc 240  
 Asn Leu Val Val Val His Ser Val Phe Leu Leu Thr Val Pro Phe Arg  
 65 70 75 80  
 ttg acc tac ctc atc aag aag act tgg atg ttt ggg ctg ccc ttc tgc 288  
 Leu Thr Tyr Leu Ile Lys Lys Thr Trp Met Phe Gly Leu Pro Phe Cys

| 85                 |     |     |     |     |     |     |     |     |     | 90  |     |     |     |     | 95  |     |  |  |  |  |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| aaa                | ttt | gtg | agt | gcc | atg | ctg | cac | atc | cac | atg | tac | ctc | acg | ttc | cta | 336 |  |  |  |  |
| Lys                | Phe | Val | Ser | Ala | Met | Leu | His | Ile | His | Met | Tyr | Leu | Thr | Phe | Leu |     |  |  |  |  |
|                    |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |  |  |  |  |
| ttc                | tat | gtg | gtg | atc | ctg | gtc | acc | aga | tac | ctc | atc | ttc | ttc | aag | tgc | 384 |  |  |  |  |
| Phe                | Tyr | Val | Val | Ile | Leu | Val | Thr | Arg | Tyr | Leu | Ile | Phe | Phe | Lys | Cys |     |  |  |  |  |
|                    |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |  |  |  |  |
| aaa                | gac | aaa | gtg | gaa | ttc | tac | aga | aaa | ctg | cat | gct | gtg | gct | gcc | agt | 432 |  |  |  |  |
| Lys                | Asp | Lys | Val | Glu | Phe | Tyr | Arg | Lys | Leu | His | Ala | Val | Ala | Ala | Ser |     |  |  |  |  |
|                    | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |  |  |  |  |
| gct                | ggc | atg | tgg | acg | ctg | gtg | att | gtc | att | gtg | gta | ccc | ctg | gtt | gtc | 480 |  |  |  |  |
| Ala                | Gly | Met | Trp | Thr | Leu | Val | Ile | Val | Ile | Val | Val | Pro | Leu | Val | Val |     |  |  |  |  |
| 145                |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |  |  |  |  |
| tcc                | cgg | tat | gga | atc | cat | gag | gaa | tac | aat | gag | gag | cac | tgt | ttt | aaa | 528 |  |  |  |  |
| Ser                | Arg | Tyr | Gly | Ile | His | Glu | Glu | Tyr | Asn | Glu | Glu | His | Cys | Phe | Lys |     |  |  |  |  |
|                    |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |  |  |  |  |
| ttt                | cac | aaa | gag | ctt | gct | tac | aca | tat | gtg | aaa | atc | atc | aac | tat | atg | 576 |  |  |  |  |
| Phe                | His | Lys | Glu | Leu | Ala | Tyr | Thr | Tyr | Val | Lys | Ile | Ile | Asn | Tyr | Met |     |  |  |  |  |
|                    |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |  |  |  |  |
| ata                | gtc | att | ttt | gtc | ata | gcc | gtt | gct | gtg | att | ctg | ttg | gtc | ttc | cag | 624 |  |  |  |  |
| Ile                | Val | Ile | Phe | Val | Ile | Ala | Val | Ala | Val | Ile | Leu | Leu | Val | Phe | Gln |     |  |  |  |  |
|                    |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |  |  |  |  |
| gtc                | ttc | atc | att | atg | ttg | atg | gtg | cag | aag | cta | cgc | cac | tct | tta | cta | 672 |  |  |  |  |
| Val                | Phe | Ile | Ile | Met | Leu | Met | Val | Gln | Lys | Leu | Arg | His | Ser | Leu | Leu |     |  |  |  |  |
|                    | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |  |  |  |  |
| tcc                | cac | cag | gag | ttc | tgg | gct | cag | ctg | aaa | aac | cta | ttt | ttt | ata | ggg | 720 |  |  |  |  |
| Ser                | His | Gln | Glu | Phe | Trp | Ala | Gln | Leu | Lys | Asn | Leu | Phe | Phe | Ile | Gly |     |  |  |  |  |
| 225                |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |  |  |  |  |
| gtc                | atc | ctt | gtt | tgt | ttc | ctt | ccc | tac | cag | ttc | ttt | agg | atc | tat | tac | 768 |  |  |  |  |
| Val                | Ile | Leu | Val | Cys | Phe | Leu | Pro | Tyr | Gln | Phe | Phe | Arg | Ile | Tyr | Tyr |     |  |  |  |  |
|                    |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |  |  |  |  |
| ttg                | aat | gtt | gtg | acg | cat | tcc | aat | gcc | tgt | agc | agc | aag | gtt | gca | ttt | 816 |  |  |  |  |
| Leu                | Asn | Val | Val | Thr | His | Ser | Asn | Ala | Cys | Ser | Ser | Lys | Val | Ala | Phe |     |  |  |  |  |
|                    |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |     |  |  |  |  |
| tat                | aac | gaa | atc | ttc | ttg | agt | gta | aca | gca | att | agc | tgc | tat | gat | ttg | 864 |  |  |  |  |
| Tyr                | Asn | Glu | Ile | Phe | Leu | Ser | Val | Thr | Ala | Ile | Ser | Cys | Tyr | Asp | Leu |     |  |  |  |  |
|                    |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |  |  |  |  |
| ctt                | ctc | ttt | gtc | ttt | ggg | gga | agc | cat | tgg | ttt | aag | caa | aag | ata | att | 912 |  |  |  |  |
| Leu                | Leu | Phe | Val | Phe | Gly | Gly | Ser | His | Trp | Phe | Lys | Gln | Lys | Ile | Ile |     |  |  |  |  |
|                    | 290 |     |     |     | 295 |     |     |     |     |     | 300 |     |     |     |     |     |  |  |  |  |
| ggc                | tta | tgg | aat | tgt | gtt | ttg | tgc | cgt |     |     |     |     |     |     |     | 939 |  |  |  |  |
| Gly                | Leu | Trp | Asn | Cys | Val | Leu | Cys | Arg |     |     |     |     |     |     |     |     |  |  |  |  |
| 305                |     |     |     |     | 310 |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
| <210> 4            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
| <211> 356          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
| <212> PRT          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
| <213> Mus muscalis |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
| <400> 4            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
| Met                | Glu | Ile | Pro | Ala | Val | Thr | Glu | Pro | Ser | Tyr | Asn | Thr | Val | Ala | Lys |     |  |  |  |  |
| 1                  |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |  |  |  |  |
| Asn                | Asp | Phe | Met | Ser | Gly | Phe | Leu | Cys | Phe | Ser | Ile | Asn | Val | Arg | Ala |     |  |  |  |  |
|                    |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |  |  |  |  |
| Phe                | Gly | Ile | Thr | Val | Pro | Thr | Pro | Leu | Tyr | Ser | Leu | Val | Phe | Ile | Ile |     |  |  |  |  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Val | Ile | Gly | His | Val | Leu | Val | Val | Leu | Val | Leu | Ile | Gln | His | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Leu | Arg | Asn | Met | Thr | Ser | Ile | Tyr | Leu | Phe | Asn | Leu | Ala | Ile | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Asp | Leu | Val | Phe | Leu | Ser | Thr | Leu | Pro | Phe | Trp | Val | Asp | Tyr | Ile | Met |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Lys | Gly | Asp | Trp | Ile | Phe | Gly | Asn | Ala | Met | Cys | Lys | Phe | Val | Ser | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Tyr | Tyr | Leu | Gly | Leu | Tyr | Ser | Asp | Met | Phe | Phe | Ile | Thr | Leu | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Thr | Ile | Asp | Arg | Tyr | Leu | Ala | Val | Val | His | Val | Val | Phe | Ala | Leu | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ala | Arg | Thr | Val | Thr | Phe | Gly | Ile | Ile | Ser | Ser | Ile | Ile | Thr | Trp | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Leu | Ala | Ala | Leu | Val | Ser | Ile | Pro | Cys | Leu | Tyr | Val | Phe | Lys | Ser | Gln |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Met | Glu | Phe | Thr | Tyr | His | Thr | Cys | Arg | Ala | Ile | Leu | Pro | Arg | Lys | Ser |
|     |     |     | 180 |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Leu | Ile | Arg | Phe | Leu | Arg | Phe | Gln | Ala | Leu | Thr | Met | Asn | Ile | Leu | Gly |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Leu | Ile | Leu | Pro | Leu | Leu | Ala | Met | Ile | Ile | Cys | Tyr | Thr | Arg | Ile | Ile |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Asn | Val | Leu | His | Arg | Arg | Pro | Asn | Lys | Lys | Lys | Ala | Lys | Val | Met | Arg |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Leu | Ile | Phe | Val | Ile | Thr | Leu | Leu | Phe | Phe | Leu | Leu | Leu | Ala | Pro | Tyr |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Tyr | Leu | Ala | Ala | Phe | Val | Ser | Ala | Phe | Glu | Asp | Val | Leu | Phe | Thr | Pro |
|     |     | 260 |     |     |     |     | 265 |     |     |     |     |     | 270 |     |     |
| Ser | Cys | Leu | Arg | Ser | Gln | Gln | Val | Asp | Leu | Ser | Leu | Met | Ile | Thr | Glu |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Ala | Leu | Ala | Tyr | Thr | His | Cys | Cys | Val | Asn | Pro | Val | Ile | Tyr | Val | Phe |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Val | Gly | Lys | Arg | Phe | Arg | Lys | Tyr | Leu | Trp | Gln | Leu | Phe | Arg | Arg | His |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Thr | Ala | Ile | Thr | Leu | Pro | Gln | Trp | Leu | Pro | Phe | Leu | Ser | Glu | Asp | Arg |
|     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |     |     |
| Ala | Gln | Arg | Ala | Ser | Ala | Arg | Leu | Pro | Ser | Thr | Val | Glu | Ile | Glu | Thr |
|     |     |     | 340 |     |     |     | 345 |     |     |     |     |     | 350 |     |     |
| Ser | Ala | Asp | Leu |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     | 355 |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 5  
 <211> 68  
 <212> PRT  
 <213> Mus muscalis

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Arg | Asn | Met | Thr | Ser | Ile | Tyr | Leu | Phe | Asn | Leu | Ala | Ile | Ser | Asp | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Phe | Leu | Ser | Thr | Leu | Pro | Phe | Trp | Val | Asp | Tyr | Ile | Met | Lys | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Trp | Ile | Phe | Gly | Asn | Ala | Met | Cys | Lys | Phe | Val | Ser | Gly | Phe | Tyr |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Tyr | Leu | Gly | Leu | Tyr | Ser | Asp | Met | Phe | Phe | Ile | Thr | Leu | Leu | Thr | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asp | Arg | Tyr | Leu |     |     |     |     |     |     |     |     |     |     |     |     |
| 65  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 6  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <221> VARIANT  
 <222> (1)...(1)  
 <223> Xaa at position 1 can be G or S or T or A or  
 L or I or V or M or F or Y or W or C

<221> VARIANT  
 <222> (2)...(2)  
 <223> Xaa at position 2 can be G or S or T or A or  
 N or P or D or E  
  
 <221> VARIANT  
 <222> (3)...(3)  
 <223> Xaa at position 3 can not be E or D or  
 P or K or R or H  
  
 <223> Xaa at position 4 can  
 be any amino acid  
  
 <223> Xaa at position 5 can  
 be any amino acid  
  
 <221> VARIANT  
 <222> (6)...(6)  
 <223> Xaa at position 6 can be L or I or V or M or  
 N or Q or G or A  
  
 <223> Xaa at position 7 can  
 be any amino acid  
  
 <223> Xaa at position 8 can  
 be any amino acid  
  
 <221> VARIANT  
 <222> (9)...(9)  
 <223> Xaa at position 9 can be L or I or V or M or  
 F or T  
  
 <221> VARIANT  
 <222> (10)...(10)  
 <223> Xaa at position 10 can be G or S or T or A or  
 N or C  
  
 <221> VARIANT  
 <222> (11)...(11)  
 <223> Xaa at position 11 can be L or I or V or M  
 or F or Y or W or S or T or A or C  
  
 <221> VARIANT  
 <222> (12)...(12)  
 <223> Xaa at position 12 can be D or E or N or H  
  
 <221> VARIANT  
 <222> (14)...(14)  
 <223> Xaa at position 14 can be F or Y or W or C  
 or S or H  
  
 <223> Xaa at position 15  
 can be any amino acid  
  
 <223> Xaa at position 16  
 can be any amino acid  
  
 <221> VARIANT  
 <222> (17)...(17)  
 <223> Xaa at position 17 can be L or I or V or M  
  
 <400> 6  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Xaa  
 1 5 10 15  
 Xaa